**Toothpick Fish**

How can the environment affect a species’ gene pool?

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due date: ROB:28th, GYHig:30th April

**Steps:**

1. You will be carrying out the activity on page 54 of the textbook except you will be using sticks (or straws) and trays rather than toothpicks and petri dishes. Read the whole activity through so you understand what you will be doing.

2. Note each stick represents an allele and not an actual fish.

Complete the table below to show the allele pairs needed (genotype) for each fish colour (phenotype.) Use these symbols: green (G), red (r), yellow (y)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phenotype** | green | red | yellow | orange |
| **Possible genotype** |  |  |  |  |

3. Calculate how many rows you will need for table A and make **neat** (they will be assessed)copies of this table and table B. They can be in your exercise book or on your ipad.

4. Carry out the experiment and complete your tables.

5. Answer the “analyse your data” and “conclude and apply” questions.

6. Complete the class summary results table below.

7. Answer the question from the textbook “How do your data compare to the class averages?”

**Table C: Summary Of Class Results**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Environment** | **Generation** | | **Green** | **Red** | **Orange** | **Yellow** |
| Green seaweed grows everywhere | First | Data |  |  |  |  |
| Mean |  |  |  |  |
| Second | Data |  |  |  |  |
| Mean |  |  |  |  |
| Third | Data |  |  |  |  |
| Mean |  |  |  |  |
| Fourth | Data |  |  |  |  |
| Mean |  |  |  |  |
| The seaweed dies | Fifth | Data | 0 |  |  |  |
|  | mean | 0 |  |  |  |

**Assessment**

|  |  |
| --- | --- |
| **Assessment area** | **Score** |
| Table A and B completed fully and neatly. (3) |  |
| “Analyse your data” questions are answered fully. (2) |  |
| “Conclude and apply” questions are answered fully. (2) |  |
| Table C is completed and the individual data is fully compared to the class average. (3) |  |
| Total (10) |  |